

102304Z
FM NPIC
TO YWQLAZC/AFSSO SAC
YWQLAZC/AFSSO ACIC
YWQLAZC/AFSSO FTD

AFSSO USAFE
AFSSO PACAF

Declassification Review by NGA/DoD

OPCEN
ZEM

TOP SECRET

SSOS PASS TO APPROPRIATE TCOS.

SECTION ONE OF TWO. CITE NPIC 3256.

SUBJECT: CAMERA INFORMATION FOR MISSION 1013-1.

A. THIS PHOTOGRAPHY INVOLVES THE USE OF EIGHT CAMERAS:
TWO MAIN CAMERAS, FOUR HORIZON CAMERAS, A STELLAR CAMERA,
AND AN INDEX CAMERA.

B. OPERATIONAL FOCAL LENGTHS (MM)

HORIZON

	MAIN	PORT	STARBOARD		STELLAR	INDEX
FWD UNIT	609.602	55.12	55.07	(PART 1)	84.065	38.186
AFT UNIT	609.577	54.48	54.90	(PART 2)	83.962	338.131

C. LENS DISTORTION (PIN CUSHION) MM

	MAIN LENS	3	2	1	0	359	358	357
FWD UNIT	.005	.001	.000	.000	.001	.004	.006	
AFT UNIT	.002	.002	.000	.000	.003	.005	.005	

OUT54426

12 NOV 1964

HFS

WCB

CFC

PNS

CL

-OPS FILES-

25X1

25X1

25X1

25X1

1

25X1

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(2) HORIZON CAMERAS (MM)	FWD		AFT	
	PORT	STARBOARD	PORT	STARBOARD
RADIAL) 10 DEGREES	.000	.002	.002	.002
20 DEGREES	.003	.001	.009	.002
(TANGENTIAL) MAX VECTOR	.003	.004	.003	.003

D. DEPRESSION ANGLES OF HORIZON CAMERAS RELATIVE TO
NOMINAL MAIN CAMERA

	PORT	STARBOARD
FWD	14 DEGREES 43 MIN.	15 DEGREES 05 MIN.
AFT	15 DEGREES 55 MIN.	15 DEGREES 25 MIN.

E. CAMERA FILTER AND EXPOSURE DATA

	MAIN	HORIZON	STELLAR	INDEX
FILTER	WRATTEN 21	WRATTEN 25	NONE	WRATTEN 21
APERTURE	F 3.5	STARBOARD F 8.0	F 1.8	F 4.5
		PORT F 6.8		

SLIT WIDTH/

EXPOSURE	0.200 INCH	1/100 SEC.	2.0 SEC.	1/500 SEC.
FILM	4404	4404	4401	4400

F. RESOLUTION CAPABILITIES

(1) (L/MM AVG)	MAIN	PORT HORIZON	STARBOARD HORIZON
FWD	171	91.3	81.8
AFT	167	116.1	102.3
(2) INDEX (L/MM AWAR)	PART 1	73.8	PART 2 85.7

G. TIMING MARKS

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FREQUENCY MARKS WILL APPEAR ON THE FILM AT A RATE OF
200 CYCLES PER SECOND.

H. CALIBRATED ANGLES OF CAMERAS

- (1) CALIBRATED CONVERGENT ANGLE OF MAIN CAMERAS 29 DEGREES
51.83 MIN.
- (2) CALIBRATED ANGLE BETWEEN STELLAR AND INDEX CAMERAS
(PART 1) 89 DEGREES 56.8 MIN.
(PART 2) 89 DEGREES 55.7 MIN.

I. IMAGE MOTION COMPENSATION DATA

- A. CYCLE RATE (CPS) AND GROUND ANGULAR VELOCITY (GAV
IN RAD/SEC)

REF. LEVEL			AMPL. LEVEL		
NO.	CPS.	GAV.	NO.	CPS.	GAV.
7	0.3137	0.0284	4	0.1282	0.0116
6	0.3262	0.0295	4	0.1290	0.0117

- B. PASSES: REF. 7, AMPL. 4 : 1M1 THRU 30D1
REF. 6, AMPL. 4 : 31D1 THRU 63D1

J. PROGRAM TIME DATA

PASS	CAMERA ON TIME				PROGRAM UP TIME		PROGRAM
	(ZEBRA TIME)				UP RAMP	DURATION	
	DAY	HOUR	MIN	SEC	SEC	SEC	
1M1	02	22	36	58	NA	1430	
3D1	03	01	59	52	1284	87	
4D1	03	03	29	12	1191	143	
4D2	03	03	32	13	1371	62	

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5D 1	03	05	01	5 8	1305	118
5D 2	03	05	05	18	15 05	112
8D 1	03	09	34	11	1290	94
8D 2	03	09	36	37	1436	227
9AE	03	10	45	08	105	46
9D 1	03	11	06	19	1376	204
10D 1	03	12	51	27	2239	68
16D 1	03	21	46	25	1654	36
19D 1	04	02	13	37	1344	132
21D 1	04	05	16	49	1442	70
21D 2	04	05	18	50	1563	114
21D 3	04	05	22	18	1771	106
23D 1	04	08	17	05	1365	213
23D 2	04	08	21	16	1616	90
24D 1	04	09	44	17	1155	171
24D 2	04	09	49	11	1449	99
25D 1	04	11	18	45	1377	85
30D 1	04	19	01	11	1900	69
31D 1	04	20	29	47	1771	54
35D 1	05	02	25	08	1361	102
36D 1	05	03	55	55	1363	119
36D 2	05	03	58	31	1518	78
36D 3	05	04	00	26	1633	84
37D 1	05	05	26	11	1334	120
37D 2	05	05	29	05	1508	100

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37D3	05	05	35	05	1868	172
38D1	05	06	59	06	1464	69
38D2	05	07	02	53	1691	69
39D1	05	08	27	47	1340	189
39D2	05	08	32	26	1620	174
40D1	05	10	00	02	1431	101
41D1	05	11	33	00	1564	100
47D1	05	20	41	10	1801	112
51D1	06	02	37	23	1343	120
52D1	06	04	06	31	1242	132
52D2	06	04	09	19	1411	141
52D3	06	04	13	01	1632	84
53D1	06	05	40	44	1456	117
53D2	06	05	44	31	1683	395
54D1	06	07	09	42	1351	65
54D2	06	07	11	23	1453	290
55D1	06	08	38	47	1253	123
55D2	06	08	41	31	1417	92
55D3	06	08	43	40	1546	61
55D4	06	08	46	33	1719	98
56D1	06	10	13	19	1481	147
57D1	06	11	44	37	1515	100
61D1	06	17	50	53	1724	114
63D1	06	20	53	09	1774	57

NOTE: DATA IS THE SAME FOR BOTH THE MASTER (FWD) AND SLAVE (AFT) UNITS.

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K. TIME CORRELATION (MILLISECONDS)

PASS	SYSTEM TIME	CLOCK TIME	DIFFERENCE
8	33323.442	395863.140	
9	38772.460	401312.161	PLUS 0.003
16	78439.779	440979.497	PLUS 0.017
25	39377.244	488316.982	PLUS 0.020
31	73857.010	522796.763	PLUS 0.015
40	34884.848	33353.710	PLUS 0.021
47	74611.338	73080.217	PLUS 0.017
56	35630.665	120499.565	PLUS 0.021

GP-1

T O P S E C R E T

--END OF MESSAGE--